CHAPTER 20

OPHTHALMOLOGY DEPARTMENT

STANDARD OPERATING PROCEDURE

500 BED FLEET HOSPITAL

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500 BED FLEET HOSPITAL

STANDARD OPERATING PROCEDURES

OPHTHALMOLOGY DEPARTMENT

A. **MISSION:** Provide ophthalmologic services in support of combat related abnormalities.

B. **FUNCTIONS:**

1. Evaluate ophthalmologic disorders in patients.

2. Perform ophthalmologic surgery procedures.

3. Provide optometry services.

4. Consult with medical officers of other clinical services concerning ophthalomogic problems.

C. **PHYSICAL DESCRIPTION:**

1. Location within complex:

(a) Specialty treatment area for ophthalmologic exams.

(b) Operating room for surgical procedures.

(c) Specialty treatment area for desk.

2. Sheltering.

Type: Temper Tent.

Quantity: Three - four sections.

3. Material.

IOL: 0015

D. **SPECIAL CONSIDERATIONS:**

1. Average daily admissions.

(a) Steady state = 40 admissions/day; 27 surgical, 13 medical.

(b) Peak state = 60 admissions/day; 40 surgical, 20 medical.

2. Over a 30 day period approximately 3-9% of all admissions will have a primary ophthalmology diagnosis.

E. **WORKLOAD:** Anticipated ophthalmology workload for 250 bed combat zone hospital over one 30 day period.

PATIENT CONDITION

SERVICE	NUMBER	NAME
Medical	217	Herpes Zoster, severe prolonged pain, eye involvement
Medical	223	Corneal Ulcer, abrasion-severe corneal ulcer
Medical	225	Iridocyclitis, acute severe, marked visual impairment
Medical	226	Iridocyclitis, acute moderate, less marked visual impairment
Surgical	22	Eye Injury Open Closed - moderate, no loss of intraocular fluid
Surgical	21	Eye Injury Open or Closed - severe, loss of intraocular fluid

F. **ORGANIZATION:**

1. Responsibility. The Head, Ophthalmology Department, who reports to the Director of Surgical Services, the Ophthalmology Department personnel.

2. Organizational chart.

DIRECTOR, SURGICAL DEPARTMENT

HEAD, OPHTHALMOLOGY DEPART. (2100) (1) LCDR

OPTHALMOLOGIST (2100) (1) LT

OPTOMETRIST (2300) (1) LCDR

OPTICIAN TECH (8463)	OCULAR TECH	OCULAR TECH ADVANCED (8445) BASIC (8463)
(1) E-4	(1) E-5	(1) E-4

3. Staffing.

(a) Criteria.

(1) Ratio of staff/bed/unit/module required.

(2) Special qualifications required.

(b) Staffing pattern: Two 12 hour watches.

Total Personnel	AM Watch	Night Watch	Assigned
Opthalmologist	1 (O-4)	-	1
Opthalmologist	-	1 (O-3)	1
Opthometrist	1 (O-4)	-	1
Occular Tech Adv	1 (E-5)	-	1
Occular Tech Basic	- 1 (O-4)	-	1
Optometry Tech	1 (E-4)	1 (E-4)	2

4. Assignments by Billet Sequence Code: See TAB A, page 7

5. Watch Bill: See TAB B, page 8

6. Special Watches: N/A

G. **TASKS:**

	TASK		METHOD
1.	MAINTAIN READINESS	1.1	Check all ophthalmology instrumentation and appliances in Specialty Treatment Unit, Minor Surgery Area, and Main OR, daily.
		1.2	Check daily that minor surgical sets are available in the Casualty Receiving Area.
		1.3	Ensure daily that required supplies are available in the treatment area.
2.	RECEIVE PATIENTS	2.1	Accept ophthalmology patients from Triage/Casualty Receiving as referred.
		2.2	Examine and establish primary diagnosis.

	2.3	Establish treatment plan/program as appropriate for diagnosis and ensure that orders are recorded by Ophthalmologist.
	2.4	Conduct daily ward rounds to all ophthalmology patients.
	2.5	Ensure that established orders are being carried out by nursing/hospital corps personnel.
3. COORDINATE SURGERY	3.1	The Ophthalmologist will:
	3.1.A	Coordinate all surgical procedures with the minor OR and main OR.
	3.1.B	Prepare a daily OR schedule.
	3.1.C	Distribute the schedule to the Minor OR, Main OR and Anesthesia departments.
4. PREPARE FOR SURGICAL PROCEDURES	4.1	The ORL tech will:
	4.1.A	Clean and set up the ORL operating apparatus and treatment space daily or as necessary.
	4.1.B	Remove used exam instruments, scrub with germicidal solution and rinse. Dispose of trash and waste material in double plastic bags.
	4.1.C	Disengage all needles and scalpel blades from handles and place in tray IAW, TAB C-1.
	4.1.D	Dispose of liquid medical waste, (suction machine) IAW TAB C-2.
	4.1.E	Roll linens in cocoon fashion and double bag in a fabric laundry bag.

	4.1.F	Damp dust treatment space with germicidal solution daily.
5. PROVIDE OPHTHALMOLOGY	5.1	Perform ORL-HNS IAW established services. Standards of combat casualty care and in concert with tasks and procedures contained in Chapter 4, Operating Room.
6. MAINTAIN MATERIAL READINESS	6.1	Ophthalmology Technician will:
	6.1.A	Perform operator maintenance on operating apparatus as required by operator manuals.
	6.1.B	Perform calibration of required equipment weekly.
	6.1.C	Keep inventory of treatment area supplies and linens, and restock as necessary.
	6.1.D	Keep inventory and restock sets for use in the treatment area.
	6.1.E	Return outdated drugs to Pharmacy for disposal.
	6.1.F	Obtain maintenance and repair of medical and non-medical equipment.
7. PERFORM LEADERSHIP TASKS	7.1	Provide training and supervision to assist assigned personnel to advance their clinical and administrative abilities.
8. PROVIDE CONTINUING EDUCATION	8.1	Provide orientation to the Ophthalmology Department.
	8.2	Evaluate staff skills prior to assigning more complex duties.
	8.3	Cross-train personnel in all specialty and indirect care areas.
	8.4	Provide senior personnel with experience in administration,

		clinical teaching, and supervision.
	8.5	Conduct classes on special procedures, principles, and equipment.
9. PROVIDE SUPERVISION	9.1	Provide performance counseling to all personnel on a continuing basis.

H. **STANDARD OPERATING PROCEDURES:** See Tab C, page 9.

I. **CLINICAL POLICIES/GUIDELINES:** See TAB D, page 46.

J. **STANDARDS AND JOB DESCRIPTIONS:** See Tab E, page 49.

K. DOCUMENTATION:

1. References See Tab F, page 58.

2. Forms See Tab G, page 59.

TAB A

ASSIGNMENTS BY BILLET SEQUENCE CODE

Department: OPHTHALMOLOGY

Billet Number	Title	Designator/ Spec. Code	Rank/ Rate	Watch Section
56029	HD, OPTHALMOLOGY DEPARTMENT	2100/1524J	O-4	*
56049	OPHTHALMOLOGIST	2100/1524J	0-3	+
56069	OPTHOMETRIST	2300/1880D	O-4	*
56019	OCULAR TECH ADVANCED	0000/HM	E-5	*
56039	OCULAR TECH BASIC	0000/HM	E-4	+
56059	OPTOMETRY TECH	OOOO/HM	E-4	*
56061	OPTOMETRY TECH	OOOO/HM	E-4	+

* NOTE 1 = Permanent day watch.

\+ NOTE 2 = Permanent night watch.

TAB B

WATCH BILL FOR OPHTHALMOLOGY

Section	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S
	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Opthamol	A	A	A	A	A	A	E	A	A	A	A	A	A	E	A	A	A	A	A	A	E
	*	*	*	*	*	*		*	*	*	*	*	*		*	*	*	*	*	*	
Optomet	E	P	P	P	P	P	P	E	P	P	P	P	P	P	E	P	P	P	P	P	P

KEY:

A = 0700-1900.

P = 1900-0700.

E = Excused.

* = Call.

TAB C

STANDARD OPERATING PROCEDURES

INDEX

TAB C-1

SHARP ITEM PRECAUTIONS

A. **PURPOSE:** To dispose of used needles and knife blades in a safe manner. To Prevent injury and potential risk of contacting hepatitis, syphilis, malaria, aspergillosis, or aids.

B. **DEFINITION:** N/A.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

1. Needle rack.

2. Perforated stainless steel box.

3. Needle holder.

D. **CRITERIA:**

1. Needles are never discarded loose in trash receptacles.

2. Knife blades are always removed from handles before reprocessing is done.

3. Sharp objects must be enclosed and secured so they cannot perforate the receptacle.

E. **STEPS:**

1. Upon completion of surgical case, the Surgical Tech will:

(a) Separate sharp objects from other instruments.

(b) Remove knife blades from handles.

(1) Point the blade toward table away from self.

(2) Remove blades with a needle holder, never use fingers.

(3) Place used blades in a non-penetrable box.

(c) Place reusable surgical needles, either on needle rack or loose, into a perforated stainless steel box.

(d) Dispose of needles in a needle-destruction unit.

2. CSR Decontamination Technician will:

(a) Remove any blades/needles from non-operating room departments in

the same manner as the Surgical Technician.

(b) Run reusable needles, placed in a perforated stainless steel box, through the washer-sterilizer.

3. CSR Collection HM will:

(a) Collect needle destruction units every other day and empty contents into a firm, self-closing box with padded adhesive tape to secure the opening.

(b) Collect the firm, self-closing boxes located in operating room support space that contain used knife blades.

(c) Take the sealed, labeled contaminated boxes to Environmental Health Department for final disposition.

4. If accidentally puncture/cut finger with contaminated needle/knife blade, do the following:

(a) Notify area supervisor.

(b) Report to Specialty Treatment Area for first aid.

(c) Complete an incident report on NAVMED 6010/14 form.

F. **RESPONSIBILITY:**

1. OR Technicians.

2. CSR Technicians.

3. Environmental Health Department.

TAB C-2

HAZARDOUS WASTE

A. **PURPOSE:** To provide guidance for the collection, handling and disposal of hospital generated wastes which have contacted living organisms or may otherwise be considered infectious or hazardous.

B. **DEFINITION:**

1. Background: The operation of health care facilities creates waste materials, some of which are hazardous. A subset of hazardous waste is infectious waste; proper handling of infectious waste is mandatory, to prevent spread of infectious diseases. The methods of handling infectious waste, from its generation to its ultimate disposal, must be adhered to strictly by all hands, without exception.

2. Relationship with Host Nations: It is anticipated that the hospital will be operating, in a wartime or conflict mode, on foreign soil. Close liaison with force planners during the pre-deployment planning phase is essential for the hospital command to determine host nation requirements for handling, storage and disposal of infectious hazardous wastes. Whenever possible, agreements and/or contracts with host nations should be secured for the incineration or sanitary burial of wastes in accordance with the host nation's regulations. During peacetime exercises on U.S. soil, adherence to federal, state and local environmental laws and regulations, partially listed in Appendix A, shall be strictly enforced.

3. Categories of Hospital Generated Waste: It must be clearly understood that the field hospital will generate four distinct categories of waste. Each type will require special handling procedures from generation to disposal. These categories are:

(a) Infectious waste - generated in patient contact, laboratory and surgical areas.

(b) Hazardous waste - usually chemical in nature and generated in the Laboratory, X-ray and Public Works department.

(c) Infectious hazardous waste - generated in the laboratory.

(d) Non-infectious waste - generated in all areas of the hospital.

4. Definitions.

(a) Infectious waste is defined as waste originating from the diagnosis and treatment of people. There are five (5) broad categories of infectious waste recognized by the Centers for Disease Control (CDC): microbiological, blood and blood products, pathological, sharps, and isolation waste. Examples of each of these types include, but are not necessarily

limited to, the following:

(1) Microbiological - wastes generated in laboratories processing bacterial, fungal, mycobacterial, or viral materials, such as media-containing plates, tubes, or diagnostic strips; swabs; glass slides; pipettes. Live virus vaccines (including smallpox, yellow fever, rubella, measles, mumps, polio, and adenovirus) and any of the associated equipment for their use also fall into this classification.

(2) Blood and blood products - wastes generated in the collection processing, and use of blood and blood products; tubes for diagnostic blood collection; items and materials contaminated with blood or blood products that are not designed for cleaning, resterilization, and reuse.

(3) Pathological - pathologic specimens, body tissues, contaminated disposable instruments, and laboratory waste generated in the performance of medical treatment procedures and diagnostic laboratory testing.

(4) Sharps - any diagnostic or therapeutic item possessing a surface capable of piercing human skin, not designed for cleaning, resterilization, and reuse. Examples would include needles for injections, preparation of intravenous medicinals, indwelling cannulae, and diagnostic testing (e.g., lumbar puncture, thoracentesis, paracentesis, etc.); scalpels; and other disposable instruments with a surface capable of piercing human skin.

(5) Isolation waste - wastes generated in the therapy of patients on isolation precautions. Examples would include gowns; gloves; masks; head covers; dressings; disposables basins; paper towels used in isolation rooms; and other such items and materials used in the care of isolation patients that are not designed for cleaning, resterilization, and reuse.

(b) Fomites - an object or item that is not of itself harmful, but may harbor pathogenic microrganisms and serve as a vehicle in the transmission of infections. Examples would include but are not limited to bedding, linen, cloth towels and washrags, diagnostic medical instruments (e.g., stethoscopes, sphygmomanometers, thermometers), and personal items (e.g., razors, toothbrushes, toiletries).

(c) Hazardous waste - any wastes, or combination of wastes, which because of its quantity, concentration, physical or chemical properties may pose a substantial present or potential threat to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed.

(d) Infectious hazardous waste - any combination of materials and agents that meet the definitions described in 2-4.a. and 2-4.c. above. These wastes will typically be generated in the laboratory when organic pathogens are combined with hazardous chemicals or reagents.

(e) Non-infectious waste - waste generated from non-clinical spaces and waste from patients and their related procedures, where no infection or contagious disease exists.

(f) Storage - the holding of infectious hazardous waste for a temporary period, at the end of which the waste is treated, disposed of, or stored elsewhere.

(g) Treatment - any method, technique, or process designed to change the chemical, physical, or biological characteristics of any infectious hazardous waste so as to render such waste nonhazardous, or less hazardous or safer for transportation, storage or disposal.

(h) Autoclave - an apparatus using steam under pressure for sterilizing medical equipment.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:** N/A.

D. **CRITERIA:**

Hazardous waste is properly handled and disposed.

E. **STEPS:**

1. Handling infectious hazardous waste:

(a) Ward and laboratory personnel shall utilize personal protective clothing and procedures which would normally be practiced in a traditional health care setting for the control of the spread of disease.

(b) Personnel shall wear disposable gloves, gowns, and shoe and hair covers.

(c) Patient contact and laboratory areas will utilize clearly marked, impervious, containers for the disposal of all sharps. When full, the sharps container shall be securely closed with autoclave tape.

(d) Patient areas will utilize clearly marked containers lined with double plastic bags, the outer bag being an orange autoclavable "biological hazard" bag. These containers will be separate from non-infectious "trash" containers. When full, the inner bag will be sealed with autoclave tape. The outer bag will be sealed with filament reinforced tape and autoclave tape.

2. Handling Hazardous waste:

(a) Protective equipment, as described in DHHS (NIOSH) Publication No. 81-123 (see Appendix A), will be utilized by personnel handling hazardous waste.

(b) All hazardous waste will be containerized. Ideally, in the original container or containers designed for the collection of such wastes such as those provided with automated laboratory equipment.

(c) Containerized and transporting to storage areas will be accomplished by the waste generator (i.e., lab, x-ray, public works, etc.).

3. Transport and storage of infectious waste:

(a) Ward personnel will deliver properly sealed sharps containers and double bagged infectious waste, to the laboratory temporary holding area, on a regularly scheduled basis. Ideally, this area will be one of low traffic and prohibitive to patient care, smoking, eating, and food or medicinal handling.

(b) Ideally, ward personnel will store and transport multiple bags of infectious waste in large, covered containers (i.e., "GI" cans with tight fitting lids). These containers shall be scrubbed with a germicidal solution at least once per shift or more often if grossly contaminated.

(c) Laboratory personnel will handle and routinely autoclave waste under steam pressure for a minimum of fifteen (15) minutes. After proper autoclaving, these wastes may be handled as noninfectious depending on host nation requirements.

4. Hazardous Waste, Transport & Storage:

(a) As noted in paragraphs 3-1 b.2, hazardous waste will be stored in their original containers or those designed for collection of such wastes.

(b) Waste generating personnel will containerize waste according to its chemical grouping such as lubricants, fuels, acids, alkalines, chlorinated hydrocarbons, etc. Containers will be tightly sealed and labeled.

(c) Storage areas will be at least 100 yards from the hospital compound and actual or potential potable water sources. Ideally, these areas will be elevated with natural drainage away from the hospital and water sources. Waste containers should be protected from the elements and the area clearly marked as "Hazardous Waste Storage."

5. Disposal.

(a) General. It must be understood that, in an operational situation, the methods of waste disposal range form ideal to undesirable. The following disposal methods are intended to guide the hospital command towards utilization of the best disposal method for any given situation.

(1) Host Nation Agreement - Under the Status of Forces Agreement the cognizant Commander-in-Chief (CINC) will negotiate with the host

country for disposal services.

(2) The cognizant CINC will provide disposal services utilizing established logistical support channels within the theater of operations such as the Supply Battalion of the Force Service Support Group, or supply ships.

(b) Methods. In the absence of the preferred, above mentioned disposal methods, the following may be utilized.

(1) Nonhazardous/noninfectious waste (including properly autoclaved infectious waste).

a Burial in a pit as deep as organic equipment will allow and covered with at least two feet of earth. Burial pits should be at least 100 yards from the hospital compound and potable water sources.

b Burning by mixing with fuel oil until only ash remains. Ash should then be buried as above. Tactical consideration must be given to open burning as smoke may give away the hospitals location.

(2) Hazardous waste.

a Laboratory chemical waste which contains infectious, organic matter, is to be treated as hazardous as autoclaving of liquids in closed containers is not authorized.

b Burial in sealed, marked containers, as deep as organic equipment will permit. Burial sites should be lined with plastic sheeting, covered with at least four feet of earth and conspicuously marked. Sites should be at least 100 yards from the hospital compound and potable water sources.

F. **RESPONSIBILITY:**

1. The Commanding Officer is responsible for ensuring the proper management of the overall infectious and hazardous waste program and to interface with the host nation to ensure local regulations are satisfied.

2. Nursing Service via the clinical staff is responsible for the handling of all wastes generated in clinical spaces. This includes ensuring that adequate supplies of hampers, bags, tapes, sharps containers, and protective clothing are maintained in these spaces.

3. Laboratory Service is responsible for handling hazardous infectious wastes once it is delivered to or generated by the laboratory. The service is also responsible for proper autoclaving of such wastes to render it free from pathogens.

4. Surgical Service is responsible for handling wastes generated within

the operating room giving special attention to surgically removed human tissue.

5. Operating Management is responsible for the removal of waste from the central collection points, including the laboratory, and delivery to the designated pickup area such as the "back loading dock."

6. Public Works Department is responsible for the removal of wastes from the hospital compound and ensuring its proper disposal as outlined in this SOP.

TAB C-3

CARDIAC ARREST PROCEDURE

A. **POLICY:** In the event of sudden cessation of breath, heartbeat, or both, every effort shall be made to re-establish respiratory and/or circulatory function as soon as possible. Cardiopulmonary resuscitation shall be initiated in each incident, unless counter-maned by a Medical Officer or by written order in the patient's record.

B. **PROCEDURE:**

1. After assessment of cardiac or respiratory arrest is made, immediately initiate basic life support.

   (a) Verify unresponsiveness.

   (b) Call for help.

   (c) If unresponsive, open the airway.

   (d) Check for breathing.

   (e) If not breathing, give 2 full ventilations, 1 to 1 1/2 seconds each.

   (f) Check carotid pulse.

   (g) If pulse is absent, start chest compressions, 80 - 100 per minute.

2. Have second or third person bring emergency equipment to the scene:

   (a) Emergency Cardio Resuscitation Kit.

   (b) Oxygen cylinder.

   (c) Suction machine with all catheters attached.

3. Members of arrest team will:

   (a) Perform chest compression (one member).

   (b) Manage airway and do ventilations (one member).

   (c) Start an IV.

   (d) Draw up and administer medications as directed by ACLS certified member or Medical Officer (one member).

(e) Recorder will document arrest on Cardiac Arrest Flow Sheet. This member will be the same throughout the emergency.

C. **VITAL POINTS:**

1. Basic life support must not be interrupted for more than 5 seconds.

2. Advanced life support is only effective if proper basic life support is initiated and maintained.

3. Complete specific nursing notes showing the exact time events were done.

D. **EDUCATION REQUIREMENTS:**

1. All medical personnel must maintain Basic Cardiac Life Support (BCLS) certification.

2. All Medical Officers and Critical Care Area Nurses should maintain Advanced Cardiac Life Support (ACLS) certification.

3. CPR drills will be conducted monthly on all nursing wards in order to assure medical personnel awareness of their role in a code.

E. **RESPONSIBILITY:**

The Medical Officer on Treatment Team.

TAB C-4

REACTION TO MEDICAL EMERGENCIES

A. **PURPOSE:** To establish the protocol to react to medical emergencies.

B. **DEFINITION:** Medical emergency is a situation causing a life threatening condition that requires immediate medical attention to sustain life.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

1. Equipment.

   (a) Crash cart.

   (b) Litter with blankets.

2. Supplies.

   (a) As provided on crash cart.

   (b) As requested by attending Physician.

3. Forms.

   Chronological Record of Patient Care (SF 600).

D. **CRITERIA:**

All equipment properly supplied and functional.

E. **STEPS:**

1. Shock.

   (a) Lay patient down with feet elevated.

   (b) Keep patient warm.

   (c) Notify medical officer.

2. Hemorrhage.

   (a) Apply direct pressure to area.

   (b) Notify medical officer.

3. Pulmonary arrest.

   (a) Establish airway.

(b) Give mouth-to-mouth.

4. Cardiopulmonary arrest.

(a) Establish airway.

(b) Start CPR.

(c) Notify medical officer.

(d) Call code.

5. Obstructed airway.

(a) Clear mouth.

(b) Four blows back, four ABD thrusts.

(c) Until airway opens.

(d) Notify medical officer.

6. Emergency procedure for adverse reaction to contrast agents.

(a) With hives (urticaria), erythema, itching, or angioedema.

Notify attending physician.

(b) With the above and dyspnea (difficulty in breathing):

(1) Call for help immediately.

(2) Apply a tourniquet above the injection site to impede venous and lymphatic flow, but not arterial circulation.

(3) Protect airway, suction as needed.

(4) O_2 high flow (10-15 L/min), by reservoir mask.

(5) Patient should be supine with legs elevated unless respiratory distress predominates.

(c) Assist the physician or nurse with the following:

(1) Start large bore IV with NS TKO.

(2) Epinephrine O.5 mg 1:1000 SQ in opposite arm.

(3) Benadryl 50 mg IV push by physician.

(d) With BP less than 80 and patient critical:

(1) IV NS wide open.

(2) Epinephrine 1:10,000 0.2mg to 0.3 mg may be given very slowly IV push by physician.

(3) Benadryl 50 mg IV push by physician.

(e) Transport to Casualty Receiving as soon as possible for further definitive care.

7. Simple fainting.

(a) Lay patient down.

(b) Keep warm.

(c) Notify medical officer.

TAB C-5

DEFIBRILLATION

A. **PURPOSE:** To terminate ventricular fibrillation immediately, facilitating the establishment of an effective cardiac rhythm. This is the first and only treatment for ventricular fibrillation.

B. **DEFINITION:** Also known as precordial shock, it is the conduction of an electrical impulse into the heart to depolarize cardiac muscle and convert fibrillation rhythm into normal sinus rhythm.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

1. Defibrillator with external paddles.
2. Batteries.
3. ECG monitor with recorder.
4. Conductive medium.
5. Cardio Resuscitation Kit (Sparks Kit).
6. Oxygen therapy equipment.
7. Airways.
8. Endotracheal Anesthesia Set.
9. AMBU bag.
10. Suctioning equipment.

D. **CRITERIA:**

1. Conversion of an abnormal rhythm following a precordial thump or cough has been well demonstrated in patients with ventricular tachycardia and complete heart block. Recently, it has been demonstrated as well for ventricular fibrillation. Because the speed of defibrillation is critical, a solitary precordial thump is recommended for all witnessed cardiac arrests when a defibrillator is unavailable. When a precordial thump is used in patients who have ventricular tachycardia and a pulse, a defibrillator should be available since ventricular fibrillation can be induced. A precordial thump is delivered to the center of the sternum with the hypothenar aspect of the fist and from a height of no more than 12 inches.

2. Defibrillator battery will be charged and ready to use at all times.

3. Person in charge of the arrest will insure all personnel stand clear so that only the patient will receive the electrical current when "ALL CLEAR" is called.

E. **STEPS:**

1. Initiate basic cardiac life support (BCLS) and summon defibrillation equipment and assistance.

2. Verify ventricular fibrillation by ECG. Correlate with the clinical state of patient.

(a) Establish an airway or use existing endotracheal tube if in place.

(b) Perform external cardiac massage until defibrillator is ready. In the OR, internal cardiac massage may be necessary.

(c) When patients are monitored and defibrillation equipment is available, proceed with defibrillation.

3. Prepare to defibrillate.

(a) Obtain battery operated defibrillator.

(b) Check battery level.

(c) Prepare defibrillator paddles by covering entire metal surface with conductive medium. (The conductive medium is needed to reduce skin resistance to current flow, prevent skin burns, and allow for optimal current flow to the myocardium.)

(d) Dial 200 watts/seconds (Joules).

(e) Activate charge button to charge unit with electrical current.

(f) Validate that defibrillator unit is in the non-synchronized mode so machine will fire correctly.

(g) Place paddles firmly into position against chest wall using 25-30 pounds of pressure.

(1) Best position - transverse position.

a Place one paddle at 2nd intercostal space right of sternum.

b Place second paddle at 5th intercostal space mid-clavicular line, left of sternum.

(2) Alternate position - anterior-posterior position.

a Place one paddle at anterior-precordial area.

b Place 2nd paddle at posterior-intrascapular area.

(h) Recheck ECG rhythm on cardioscope to validate Ventricular fibrillation pattern.

(i) Give command to stand clear of bed/litter/OR table prior to defibrillation to minimize risk of micro or macro shock to staff.

4. Defibrillate the patient.

(a) Depress the discharge button while simultaneously keeping both paddles in place until the electrical current is delivered.

(b) Check ECG rhythm on cardioscope for changes in pattern.

(1) If ventricular fibrillation persists, repeat defibrillation immediately.

(2) Continue CPR during any delays in defibrillation.

(3) If a second attempt is unsuccessful, immediately defibrillate with up to 360 Joules.

(4) If the ECG monitor shows an organized rhythm, check for a pulse. Continue CPR if no pulse present.

(5) If unsuccessful, continue with current ACLS protocol.

VENTRICULAR FIBRILLATION [a]

This sequence was developed to assist in teaching how to treat a broad range of patients with ventricular fibrillation (VF) or pulseless ventricular tachycardia (VT). Some patients may require care not specified herein. This algorithm should not be construed as prohibiting such flexibility. The flow of the algorithm presumed that VF is continuing. CPR indicates cardiopulmonary resuscitation.

Witnessed Arrest	Unwitnessed Arrest
Check pulse - If no pulse	Check pulse - If no pulse
Precordial Thump	

Check pulse - If no pulse

CPR until a defibrillator is available

Check monitor for rhythm - if VF or VT

Defibrillate, 200 Joules [b]

Defibrillate, 200-300 Joules [b]

Defibrillate with up to 360 Joules [b]

CPR if no pulse

Establish IV access

Epinephrine, 1:10,000, 0.5-1.0 mg IV push [c]

Intubate if possible [d]

Defibrillate with up to 360 Joules [b]

Lidocaine, 1 mg/kg IV push

Defibrillate with up to 360 Joules [b]

Bretylium, 5mg/kg IV push [e]

(Consider Bicarbonate)[f]

Defibrillate with up to 360 Joules [b]

Bretylium, 10 mg/kg IV push [e]

Defibrillate with up to 360 Joules [b]

Repeat Lidocaine or Bretylium

Defibrillate with up to 360 Joules [b]

NOTES:

1. Pulseless ventricular tachycardia should be treated identically to ventricular fibrillation.

2. Check pulse and rhythm after each shock. If VF recurs after transiently converting (rather than persists without ever converting), use whatever energy level has previously been successful for defibrillation.

3. Epinephrine infusion should be repeated every five (5) minutes.

4. Intubation is preferable. If it can be accomplished simultaneously with other techniques, then the earlier the better. However, defibrillation and epinephrine are more important initially if the patient can be ventilated without intubation.

5. Some may prefer repeated doses of lidocaine, which may be given in 0.5 mg/kg douses every 8 minutes to a total dose of 3 mg/kg.

6. The value of sodium bicarbonate is questionable during cardiac arrest, and it is not recommended for the routine cardiac arrest sequence. Consideration of its use in a dose of l mEg/kg is appropriate at this point. One half of the original dose may be repeated every 10 minutes if it is used.

SUSTAINED VENTRICULAR TACHYCARDIA

This sequence was developed to assist in teaching how to treat a broad range of patients with sustained ventricular tachycardia (VT). Some patients may require care not specified herein. This algorithm should not be construed as prohibiting such flexibility. The flow of the algorithm presumes that VT is continuing. VF indicates ventricular fibrillation; IV, intravenous.

No Pulse

Pulse Present

Treat as VF	Stable	Unstable
	O_2	O_2
	IV Access	IV Access
	Lidocaine, 1 mg/kg	(Consider sedation)[c]
	Lidocaine, 0.5 mg/kg every 8 min. until VT resolves, or up to 3 mg/kg.	Cardiovert, 50 Joules [d,e] Cardiovert, 100 Joules [d]
	Procainamide, 20 mg/min until VT resolves, or up to 1,000 mg.	Cardiovert, 200 Joules [d] Cardiovert, with up to 360 Joules [d]
	Cardiovert as in unstable patients [c]	If recurrent, add Lidocaine and cardiovert again starting at energy level previously successful; then procainamide or Bretylium.

NOTES:

1. If the patient becomes unstable (see Footnote b for definition) at any time, move to the "Unstable" arm of the algorithm.

2. Unstable = symptoms (e.g. chest pain, dyspnea), hypotension (systolic BP <90 mm Hg), congestive heart failure, ischemia, or infarction.

3. Sedation should be considered for all patients, including those defined in Footnote b as unstable, except those who are hemodynamically unstable (e.g., hypotensive, in pulmonary edema, or unconscious).

4. If hypotension, pulmonary edema, or unconsciousness is present, unsynchronized cardioversion should be done to avoid the delay associated with synchronization.

5. In the absence of hypotension, pulmonary edema, or unconsciousness, a precordial thump may be employed prior to cardioversion.

6. Once VT has resolved, begin an IV infusion of the antiarrhythmic agent that has aided the resolution of the VT. If hypotensive, in pulmonary edema, or unconscious, use lidocaine if cardioversion alone is unsuccessful, followed by bretylium. In all other patients, the recommended order of therapy is lidocaine, procainamide, and the bretyulium.

ASYSTOLE (CARDIAC STANDSTILL)

This sequence was developed to assist in teaching how to treat a broad range of patients with asystole. Some patients may require care not specified herein. This algorithm should not be construed to prohibit such flexibility. The flow of the algorithm presumes asystole is continuing. CPR indicates cardiopulmonary resuscitation; VF, ventricular fibrillation; IV, intravenous.

If rhythm is unclear and possibly ventricular fibrillation, defibrillate as for VF.
If Asystole is present: [a]

Continue CPR

Establish IV access

Epinephrine, 1:10,000, 0.5-1.0 mg IV push [b]

Intubate when possible [c]

Atropine, 1.0 mg IV push (repeated in 5 min)

(Consider bicarbonate) [d]

Consider pacing

NOTES:

1. Asystole should be confirmed in two leads.

2. Epinephrine should be repeated every 5 minutes.

3. Intubation is preferable; if it can be accomplished simultaneously with other techniques, then the earlier the better. However, CPR and the use of epinephrine are more important initially if the patient can be ventilated without intubation. (Endotracheal epinephrine may be used.)

4. The value of sodium bicarbonate is questionable during cardiac arrest, and it is not recommended for the routine cardiac arrest sequence. Consideration of its use in a dose of 1mEg/kg is appropriate at this point. One half of the original dose may be repeated every 10 minutes if it is used.

ELECTROMECHANICAL DISSOCIATION

This sequence was developed to assist in teaching how to treat a broad range of patients with electromechanical dissociation (EMD). Some patients may require care not specified herein. This algorithm should not be construed to prohibit such flexibility. The flow of the algorithm presumes that EMD is continuing. CPR indicates cardiopulmonary resuscitation; IV, intravenous.

Continue CPR

Establish IV access

Epinephrine, 1:10,000, 0.5-1.0 mg IV push [a]

Intubate when possible [b]

(Consider bicarbonate) [c]

Consider Hypovolemia,
Cardiac Tamponade,
Tension Pneumothorax,
Hypoxemia,
Acidosis,
Pulmonary Embolism

NOTES:

1. Epinephrine infusion should be repeated every 5 minutes.

2. Intubation is preferable. If it can be accomplished simultaneously with other techniques, then the earlier the better. However, epinephrine is more important initially if the patient can be ventilated without intubation.

3. The value of sodium bicarbonate is questionable during cardiac arrest, and it is not recommended for the routine cardiac arrest sequence. Consideration of its use in a dose of 1 mEg/kg is appropriate at this point. One half of the original dose may be repeated every 10 minutes if it is used.

PAROXYSMAL SUPRAVENTRICULAR TACHYCARDIA

This sequence was developed to assist in teaching how to treat a broad range of patients with sustained PSVT. Some patients may require care not specified herein. This algorithm should be not construed as prohibiting such flexibility. The flow of the algorithm presumes PSVT is continuing.

Unstable	Stable
Synchronous Cardioversion 75 - 100 Joules	Vagal Maneuvers
Synchronous Cardioversion 200 Joules	Verapamil, 5 mg IV
Synchronous Cardioversion 360 Joules	Verapamil, 10 mg IV (in 15-20 min)
Correct underlying abnormalities	Cardioversion, Digoxin B-Blockers, Pacing as indicated
Pharmacological Therapy - Cardioversion	

If conversion occurs but PSVT recurs, repeated electrical cardioversion is not indicated. Sedation should be used as time permits.

BRADYCARDIA

This sequence was developed to assist in teaching how to treat a broad range of patients with bradycardia. Some patients may require care not specified herein. This algorithm should not be construed to prohibit such flexibility. A-V indicates atrioventricular.

Slow Heart Rate (<60 beats/min) [a]

Sinus or Junctional

Second Degree A-V Block Type I

Third Degree A-V Block Type II

Signs or Symptoms [b]

Signs or Symptoms [b]

No

Yes

No

Observe

Atropine, 0.5-1.0 mg

Transvenous Pacemaker

Continued Signs and Symptoms b

No

Yes

For Second Degree Type II or Third Degree:

For Second Degree Type I, sinus or junctional:

Repeat Atropine, 0.5-1.0 mg.

Continued Signs/Symptoms [b]

Transvenous Pacemaker

Observe

Yes

External Pacemaker [c]

or

Isoproterenol, 2-10 mg/min [c]

Transvenous Pacemaker

NOTES:

1. A solitary chest thump or cough may stimulate cardiac electrical activity and result in improved cardiac output and may be used at this point.

2. Hypotension (BP <90 mm Hg), PVCs, altered mental status or symptoms (e.g., chest pain, dyspnea), ischemia, or infarction.

3. Temporizing therapy.

VENTRICULAR ECTOPY:
ACUTE SUPPRESSIVE THERAPY

This sequence was developed to assist in teaching how to treat a broad range of patients with ventricular ectopy. Some patients may require therapy not specified herein. This algorithm should not be construed as prohibiting such flexibility.

Assess for need for
Acute Suppressive Therapy

Rule out treatable cause

Consider serum potassium

Consider digitalis level

Consider bradycardia

Consider drugs

Lidocaine, 1 mg/kg

If not suppressed, repeat lidocaine,
0.5 mg/kg every 2-5 min. until no ectopy,
or up to 3 mg/kg given

If not suppressed, procainamide 20 mg/min
until no ectopy, or up to 1,000 mg given

If not suppressed, and not contraindicated,
bretylium, 5-10 mg/kg over 8-10 min.

If not suppressed, consider overdrive pacing

Once ectopy resolved, maintain as follows:

After Lidocaine, 1 mg/kg	Lidocaine drip, 2 mg/min
After Lidocaine, 1-2 mg/kg	Lidocaine drip, 3 mg/min
After Lidocaine, 203 mg/kg	Lidocaine drip, 4 mg/min
After Procainamide	Procainamide drip, 1-4 mg/min (check blood level)
After Bretylium	Bretylium drip, 2 mg/min

Assess patient status and precipitating factors to prevent further decompensation of the patient.

5. Provide post defibrillation care.

(a) Perform a complete base-line physical assessment of patient. Assess vital signs, peripheral pulses, respiratory pattern, and level of consciousness.

(b) Monitor ECG rhythm watching for arrhythmias.

(c) Obtain a 12 lead ECG to assess myocardial damage.

(d) Administer oxygen to reduce hypoxemic state.

(e) Assess chest wall for any burns. Apply Silver Sulfadiazine to any burned areas.

(f) Establish an IV line for medication administration, if not present.

(g) Administer prescribed medications IAW Physician Orders.

(1) Monitor drips of antidysrhythmic drugs (lidocaine) carefully.

(2) Observe patient and ECG pattern for medication effects.

6. Document defibrillation on Cardiac Arrest Flow Sheet, TAB J-15. Record the following:

(a) Ventricular fibrillation was observed on monitor. If available, include pre-defibrillation ECG rhythm strip.

(b) Number of times defibrillation was attempted.

(c) Voltage used with each attempt.

(d) Post-defibrillation ECG rhythm. Include an ECG rhythm strip if available.

(e) Physiological multisystem status.

(f) Death.

F. **PRECAUTIONS:**

1. Check that equipment is properly grounded to prevent current leakage.

2. Disconnect other electrical equipment attached to patient to prevent possible equipment damage from the voltage surge.

3. Use conductive medium on paddles conservatively to prevent over arcing of the current flow to the patient.

4. Clean defibrillator of remaining electrical current immediately after use. Never set charged defibrillator paddles down.

5. Check that defibrillator is in non-synchronized mode such that it is not dependent upon an R wave to trigger defibrillation.

G. **COMPLICATIONS:**

1. Dysrhythmias.

2. Cardiac arrest.

3. Respiratory arrest.

4. Neurological impairment.

5. Altered skin integrity.

6. Pulmonary edema.

7. Pulmonary or systemic emboli.

8. Equipment malfunction.

9. Death.

H. **RESPONSIBILITY:**

1. Medical Officer will defibrillate the patient.

2. Nurse will administer medication, assist with CPR, and record the information in the patient's chart.

3. Hospital Corpsman will inspect and maintain the defibrillator equipment and supplies in working order. Supplies for the Sparks Kit will be obtained from Material Management Department.

I. **REFERENCE:**

1. Interim Guideline for Advanced Cardiac Life Support (ACLS), The American Heart Association.

2. Textbook of Advanced Cardiac Life Support (ACLS), The American Heart Association.

TAB C-6

ROUTINE MEDICATION TIMES

A. **PURPOSE:** To standardize medication administration times so that nursing service and pharmacy can perform this task most efficiently.

B. **SCHEDULE:**

1. Routine times.

(a) qd 0900

(b) bid 0900-2100

(c) tid 0600-1400-2200

(d) qid 0600-1200-1800-2400

(e) q4hr 0200-0600-1000-1400 etc

(f) q6hr 0600-1200-1800-2400

(g) q8hr 0600-1400-2200

(h) q3hr 0300-0600-0900 etc

(i) q12hr 0600-1800

(j) qhs 2200

(k) Daily insulin 0700

(l) Insulin sliding scale 0700-1100-1600-2100.

2. Special considerations for adjusting times.

(a) Triple IV antibiotics are ordered.

(b) Diuretics are ordered: best to administer before 2200.

(c) Oral antibiotics scheduled for 2400 should be given at 2200 so sleep is not interrupted.

C. **CRITERIA:**

Medications will be given at routine times unless adjusted for reason specified.

D. **STEP:**

1. Complete medication cards and MAR sheet with times stated above.

2. For medication times differing from the routine, note this in margin of Doctor's Orders Sheet, SF 508, prior to sending to Pharmacy.

E. **RESPONSIBILITY:**

Charge Nurse.

TAB C-8

PROCEDURES FOR RELEASE OF MEDICAL INFORMATION

A. **PURPOSE:** To provide procedures of release of medical information within the hospital.

B. **DEFINITION:** Medical Information - Information contained in the health or dental record of individuals who have undergone medical examination or treatment.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:** N/A.

D. **STEPS:**

1. Upon presentation of requests for medical information refer to procedures contained in the following references:

(a) Manual of the Medical Department.

(b) Freedom of Information Act, BUMEDINST 5720.8.

(c) Personal Privacy and Rights of Individuals Regarding Records, SECNAVINST 5211.5.

(d) Availability of Navy Records, Policies, SECNAVINST 5720.42.

E. **GENERAL GUIDELINES:**

1. Information contained in health care records of individuals who have undergone medical or dental examination or treatment is personal to the individual and is therefore considered to ba of a private and confidential nature. Information from such health care records, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy, should not be made available to anyone except as authorized by the patient or as allowed by the provisions of Manual of the Medical Department Chapter 23 and the Privacy Act of 1974 as implemented by SECNAVINST 5211.5 series.

2. Release of information will be coordinated by the Patient Affairs Officer.

3. Personal information of non-medical nature will not be released.

4. personnel in the patients chain of command may be provided with information required to conduct command business but will be referred to the Patient Affairs Office.

5. Release of information will conform to local command and superior command policy.

6. All Department Heads shall ensure wide dissemination of this information and compliance with procedures outlined herein.

F. **RESPONSIBILITY:**

1. Director of Administration.

2. Patient Affairs Officer.

3. Charge Nurse or Assistant.

TAB C-9

PROCEDURE FOR PICK-UP AND DELIVERY OF HOSPITAL LAUNDRY

A. **PURPOSE:** It will be logistically impossible to pick up and deliver laundry at each individual ward and CSR. Therefore, this procedure establishes central collection points and the methodology for preparing laundry for turn-in.

B. **DEFINITIONS:** N/A.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

1. Canvas laundry bags.

2. Request for clean linen/laundry.

D. **CRITERIA:** N/A.

E. **STEPS:**

1. Designated Laundry Petty Officer will:

(a) Set up laundry bags, tagging one for bed linen, one for clothing (including patient clothing), and one for contaminated laundry.

(b) Daily at 0800, take the soiled laundry to the nearest Clinical Work Space along with a request for the next day's linen/laundry supply.

(c) Distribute cleaned patient clothing.

2. Linen Control Clerks.

(a) Pick-up and receipt for hospital laundry at each Clinical Work Space.

(b) Collect Requests For Clean Linen/Laundry.

(c) Fill requests submitted the previous day and return cleaned patient clothing.

TAB C-10

PROCEDURE FOR HANDLING AND LAUNDERING CONTAMINATED LINENS

A. **PURPOSE:** The Combat Zone Fleet Hospital will generate a significant amount of contaminated linen within the operating rooms and treatment wards. These items will require special handling and laundering to prevent the spread of infection.

B. **DEFINITION:** Contaminated laundry is defined as those items requiring special disinfection and laundering to preclude the spread of infection.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

1. Chlorine bleach solution.

2. Latex gloves.

D. **CRITERIA:** N/A.

E. **STEPS:**

1. Hospital ward personnel will bag contaminated laundry separate from regular laundry. Gloves are to be worn when handling contaminated laundry.

2. Contaminated laundry will be receipted by the Linen Control Clerks and delivered to the laundry.

3. At the Laundry all contaminated laundry will be segregated from that requiring only routine processing.

4. Based on the next day's requirements and current inventory the contaminated laundry will be assigned a processing priority.

5. The contaminated laundry will be processed as follows:

(a) Presoak the contaminated laundry for 60 minutes in a chlorine solution of 50 ppm.

(b) Wash the linen in hot water using a normal cycle.

6. Once laundered these items will be placed in inventory for re-issue.

F. **RESPONSIBILITY:**

The Head, Environmental Health Department is responsible for routinely monitoring the handling and laundering of contaminated items to preclude the spread of infections.

CAUTION: Extreme care must be taken to avoid contact with the

contaminated laundry to prevent the spread of infection to laundry and other hospital personnel.

TAB C-11

PATIENT PROCEDURES FOR HANDLING EXPATRIATED PRISONERS OF WAR

A. **PURPOSE:** To detail patient handling procedures for expatriated prisoners of war within the fleet hospital.

B. **DEFINITION:**

1. Expatriated prisoners of war (EPW) - those patients who require treatment who are prisoners of U.S. or allied combat forces.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

1. Restraints (theater command military police or hospital issue).

2. Others as specified in admission procedures (all forms will be marked with the words "Prisoner of War" or "EPW").

D. **STEPS:**

1. Upon presentation of EPW to functional area, notify Security Department.

2. Upon admission to Casualty Receiving, Security will be responsible for the following notifications:

(a) Theater command military police (MP) headquarters.

(b) Executive Officer.

(c) Director of Nursing.

(d) Director of Administration.

3. Perform essential life saving care.

4. Inform MP that custody of patient will not be assumed by hospital staff and that MP will retain custody of EPW until relieved by appropriate MP headquarters staff or patient is transferred to EPW holding center (external to hospital).

5. After treatment, have corpsman or litter bearer escort MP and EPW to next functional area charge nurse. Admissions packet, correctly annotated will be delivered by hand to charge nurse.

6. During course of treatment, patient will be guarded by MP and/or restrained until treatment is terminated.

7. Movement to another functional area will be reported to Security.

8. EPW's will be fed either on the ward or in the general mess. If allowed to eat in the general mess, EPW's will be accompanied by MP guards.

E. **RESPONSIBILITY:**

CMAA/Security.

TAB C-12

CASUALTY WITH UNEXPLODED ORDNANCE EMBEDDED

A. **PURPOSE:** To provide guidance in admitting, processing, and treating a casualty who has unexploded ordnance embedded in a body part.

B. **DEFINITION:** An explosive device (most often from a rifle grenade fired at close range) which has not travelled sufficient distance for fuse detonation and explosion, and is embedded in the body of a casualty.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

Sandbags.

D. **CRITERIA:**

1. Sandbags will be stored outside Casualty Receiving Area.

2. Ordnance removed from the casualty's body without detonation.

3. Ordnance removed from the hospital environment without detonation.

4. Ordnance disposed of safely.

E. **STEPS:**

1. Prepare sandbags.

(a) Casualty Receiving Senior Corpsman is responsible for filling bags with sand and storing bags in a sheltered area outside Casualty Receiving.

(b) Prepare sandbags when setting up area.

2. Care of casualty with unexploded ordnance.

(a) Place casualty in area removed from other casualties and personnel.

(1) Keep casualty outside, if possible.

(2) If inside, stack sandbags around the casualty.

(3) Have absolute minimum of personnel near casualty.

(b) Call Security and have them summon an explosive ordnance disposal expert.

(c) Upon determination of what the ordnance is, take additional safety precautions as determined by the attending surgeon in conjunction with the

explosive ordnance disposal expert.

(d) Prepare casualty for removal of ordnance as soon as practicable. If in the OR, stack sandbags around the casualty and immediate operating personnel. All other personnel remain outside the perimeter of sandbags.

(e) Tag inpatient record chart to alert other personnel to the presence of unexploded ordnance prior to transfer from initial intake point.

(f) After removal of the unexploded ordnance, give it to the explosive ordnance disposal expert, who will then dispose of the ordnance in a safe and appropriate manner.

F. **RESPONSIBILITY:**

1. Casualty Receiving Senior Corpsman.

2. Admitting clerk.

3. Surgeon.

4. Explosive ordnance disposal expert.

TAB D

CLINICAL POLICIES/GUIDELINES

INDEX

TAB D-1

OPHTHALMOLOGY POLICIES

A. Ophthalmological procedures in the theater will be performed to expedite return to duty (RTD) or to save the globe.

B. Open eye injuries will be closed at Echelon 3 facilities utilizing loupe magnification and evacuated to Echelon 4 where vitrectomy capability exists.

C. Major soft tissue and ocular adnexal trauma will not be closed at Echelon 3 facilities.

D. Embedded corneal foreign bodies will be removed as far forward in the medical evacuation system as possible.

E. All suspected cases of epidemic kerato-conjunctivitis should be removed and isolated from other soldiers to prevent an epidemic.

F. More extensive ophthalmological procedures will be performed at Echelon 4 where the operating microscope will be located.

G. A micro surgical augmentation set will be included for vitreous and retina surgery to save the globe at Echelon 4.

H. Patients presenting with intraocular or corneal involvement with Herpes Zoster Ophthalmacus should be projected as a loss to the battle commander.

I. Patients requiring posterior vitreous surgery to include all penetrating eye wounds and cases of retained intraocular foreign bodies should be evacuated beyond the communication zone. These patients are non-returnable to duty and will be evacuated to CONUS in 7-14 days.

J. Vitro retinal surgery will be performed within a 7-14 day window. If this would have to be delayed beyond 14 days, it would not significantly alter the morbidity up to 21 days.

K. Corneal wounds will be closed with 9-0 monofilament nylon.

L. Scleral injuries would be closed with 8-0 silk.

M. Skin and soft tissue is to be closed with 6-0 and 4-0 silk.

N. Deep tissue in extraocular muscles will be closed with 5-0 vicryl.

O. Conjunctiva will be closed with 8-0 silk or 5-0 vicryl.

TAB D-2

SURGICAL GUIDELINES

A. Whenever abdominal, thoracic, or contaminated surgery is being conducted, simultaneous specialty (Orthopedic, Neurosurgical, Ophthalmological, or Vascular) will not be performed.

B. Operating microscopes are available at COMMZ only. Microscopes are nonsupportable in combat zone. They will be placed in a special augmentation package for Echelon 4. (If damage occurs, microscopes will be exchanged; no repair will be done in the theater.)

C. All casting materiel is documented in the Casting "G" module using one of the "G" tasks. Time has been documented for the cast tech for casting in the OR as well as for checks of splints, casts, pins, and fixateurs on the wards. This time is 4 minutes once a day.

D. In all open fractures of extremities a combination of external fixateurs and plastered casting material will be used. For modeling purposes, 75% of the patients will have external fixateurs and 25% will receive plaster material.

E. Irrigating Fluids:

1. DEPMEDS recognizes the requirement for adequate amount of irrigating fluids. However, emphasis should be placed on using the minimal amount necessary because of the tremendous impact on the logistical system.

2. There will be 2 liters of normal saline per operative case.

F. Dressings will ordinarily not be changed prior to day 4 post nitial wound debridement at which time the wound will be examined in the OR for further debridement or delayed primary closure. However, a blood soaked dressing, excessive hemorrhage, and/or sepsis may necessitate wound examination and redressing outside the OR. In the data base, all wounds that render the patient non-return to duty within the evacuation policy have a dressing reinforcement in 20% of patients. This category of patients otherwise have dressing reapplied as indicated above in the OR if the stay in theater exceeds 4 days. Further, if the stay exceeded 8 days, another dressing change would be done. For patients returning to duty in the theater, the same policy is in use during initial 4 days and periodic dressing change is accomplished depending on the nature and severity of injury.

G. Blood recovery equipment (or Cell Saver) is available in DEPMEDS at Echelons 3 and 4 and will be used to the maximum extent practical. Anesthesia personnel are responsible to set up and maintain this equipment during operative procedures. Theoretically, this equipment may be used in contaminated and septic cases; however, it is not applied in these cases in the data base. The machine requires a liter of sterile saline with 30,000 units of heparin for primary and an additional liter of saline for each unit of blood recovered.

Also, it requires a liter for cleaning. The cleaning of the equipment is modeled under the anesthesia area but will be performed by an operating room technician. The set-up consumables are found in CSG 12 and cleaning consumables are in CSG 22.

TAB E

STANDARDS AND JOB DESCRIPTIONS

INDEX

TAB E-1
EMERGENCY CARDIO RESUSCITATION KIT

A. **PURPOSE:** To provide appropriate supplies/equipment needed during emergency situations.

B. **DEFINITION:** N/A.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

1. Emergency Cardio Resuscitation Kit (SPARKS Kit).

2. Emergency Kit Inventory List.

3. Departmental Log.

D. **CRITERIA:**

1. Emergency Cardio Resuscitation Kit is readily accessible.

2. Kit is completely stocked and inventoried when seal is intact.

3. Oxygen cylinders, wrenches, and seals on Emergency Cardio Resuscitation Kit will be checked every watch.

E. **STEPS:**

1. Emergency Cardio Resuscitation Kit will be located in the Casualty Receiving Area at all times. It will be used only for cardio Resuscitative emergencies.

2. Senior Corpsman on each watch will check to ensure seals have not been broken, and oxygen pressure in cylinders is sufficient, that psi is not less than 500.

3. Inventory emergency Cardio Resuscitation Kit every three months or when seals have been broken.

4. Check daily the Emergency Kit Inventory List posted on the outside of kit for drug expiration dates.

5. Make appropriate entries in the Departmental Log (TAB J-10).

6. Senior Corpsman will be responsible for re-supplying cart during normal working hours. The Watch LPO assumes this responsibility at other times.

F. **RESPONSIBILITY:**

Senior Corpsman or his representative.

TAB E-2

CLEANING/MAINTENANCE SCHEDULE FOR OPHTHALMOLOGY EQUIPMENT

A. **PURPOSE:** To keep the environment as clean as possible.

B. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

1. 4 Scrub basins/buckets.
2. Gloves.
3. Wet vacuum.
4. Scrub brushes.
5. Sponge mop.
6. Wipes.
7. Detergent, GP.
8. Germicidal solution.
9. Laundry hamper.
10. Plastic, water soluble laundry bag.
11. Plastic trash bag.
12. Covered container for medical/dental wastes.

C. **CRITERIA:**

1. Soiled linens, trash, and medical wastes are removed at the end of watch and as
2. Decks will be wet-vacuumed daily.
3. Counter tops will be cleaned daily.
4. Temper tent equipment, shelving, litters are cleaned weekly.
5. Refrigerator and ice machine are cleaned weekly.

D. **STEPS:**

1. Watch cleaning schedule.

(a) When patient is transferred, immediately clean the treatment area,

and restock supplies to be ready for next admission.

(b) Check PSI level on each oxygen cylinder. Notify medical supply to replace oxygen cylinder when near 100 psi.

(c) Remove cloth laundry bags when full and place in utility module for laundry to pick up about 1000 daily

(d) Empty drainage bottles into a covered medical waste container.

(e) Empty trash into plastic bags and dispose of at designated trash area.

(f) Take used sterile instruments to CSR support module for reprocessing.

(g) Wash any surface including deck that may have become contaminated or soiled with blood, etc.

2. Daily cleaning schedule.

(a) Wash decks with wet-vacuum on night watch.

(b) Wipe down counter tops on night watch.

(c) Restock supplies on night watch.

3. Weekly cleaning schedule.

(a) Wipe down litter racks, storage cabinets, shelving and deck tops.

(b) Clean the refrigerator and ice machine.

E. **RESPONSIBILITY:**

Senior corpsman or LPO will assign cleaning details to watch.

TAB E-3.1

HEAD, OPHTHALMOLOGY DEPARTMENT JOB DESCRIPTION

The Head of the Ophthalmology Department will be responsible for the ophthalmologic care of all patients treated.

THE HEAD OF THE OPHTHALMOLOGY DEPARTMENT WILL:

1. Set policies and procedures for ophthalmologic care given in the hospital.

2. Perform ophthalmologic evaluation and treatment procedures.

3. Perform ophthalmologic surgical procedures.

4. Complete short form history and physical (SF 539) for an admission within 24 hours of admission.

5. Assign a primary diagnosis for ophthalmologic disorder.

6. Formulate treatment plans to be implemented by nurse and advanced ocular technician.

7. Document patient progress and treatment on progress notes at least every two days.

8. Make daily rounds on ophthalmology patients beginning at 0830 to evaluate and reassess treatment plans.

9. Be on call to specialty treatment area for ophthalmology admissions.

10. Monitor ophthalmologic care given by nurse and ophthalmology technician.

11. Oversee an orientation and training program for department staff.

12. Provide training lectures to medical officers about combat ophthalmologic and treatment protocols.

13. Consult with ward medical officers about patients with problems.

14. Approve all communications within and outside of the department.

15. Approve all personnel performance evaluations.

16. Prepare and submit required reports in final form.

17. Act as assistant ENT surgeon as well as regular ENT relief.

QUALIFICATIONS:

1. Designator 2100/2105 Physician.

2. Board certified 0249-NOBC Code.

3. Fully credentialed.

4. Advanced cardiac life support (ACLS) certified.

5. Advanced trauma life support (ATLS) certification recommended.

6. Intermediate leadership, management and training certification recommended.

TAB E-3.3

ADVANCED OCULAR TECHNICIAN JOB DESCRIPTION

The ocular technician will assist the Head of the Ophthalmology department in giving nursing care to patients with otorhinolaryngology disorders.

THE OCULAR TECHNICIAN WILL:

1. Give nursing care according to the standards of nursing practice.

2. Assist the ophthalmologist physician in the ophthalmology procedures.

3. Maintain all ophthalmology instruments in good working order.

4. Monitor the safety and function of all equipment, submit work request to medical repair and track progress on work requests.

5. Monitor and maintain adequate administrative and patient care supplies. Order supplies from:

   (a) CSR - sterile instrument and linen packages.

   (b) Medical Supply - medical supplies.

   (c) Supply - forms.

   (d) Laundry - linen.

6. Ensure proper disposition of contaminated instruments, equipment and materials.

7. Assist other corpsmen in the ophthalmologic care of other patients.

8. Maintain good interpersonal relations with other hospital departments and staff members.

9. Report to and obtain assistance from senior corpsman, specialty treatment area as needed.

10. Ensure daily logs and records are completed correctly.

11. Check emergency equipment each watch.

12. Perform other duties as assigned by Senior Corpsman in specialty treatment area.

QUALIFICATIONS:

1. Completion of "A" school for hospital corpsman.

2. HM3 or above.

3. NEC 8445.

4. Basic cardiac life support.

TAB E-3.4

OPTICIAN TECHNICIAN JOB DESCRIPTION

The Optician Technician will assist the Optometrist in giving optometry exams to patients.

THE OPTICIAN TECHNICIAN WILL:

1. Give nursing care according to the Standards of Nursing Practice.

2. Assist the Optometrist in the optometric procedures.

3. Maintain all optometric instruments in good working order.

4. Monitor the safety and function of all equipment, submit work request to Medical Repair and track progress on work requests.

5. Monitor and maintain adequate administrative and patient care supplies. Order supplies from:

   (a) Supply - forms.

   (b) Medical Supply - frames, etc.

6. Maintain good interpersonal relations with other hospital departments.

7. Report to and obtain assistance from senior corpsman, Specialty Treatment Area, as needed.

8. Ensure daily logs and records are completed.

9. Check emergency equipment each watch.

10. Perform other duties as assigned by senior corpsman in Specialty Treatment Area.

QUALIFICATIONS:

1. Completion of "A School" for hospital corpsman.

2. HM3 or above.

3. NEC code 8463.

4. Basic Cardiac Life Support (BCLS) certified.

TAB F

REFERENCES

INDEX

NUMBER	REFERENCE NUMBER	TITLE
F-1	NAVMED P-5966	Navy Nursing Procedures Manual.
F-2		Basic Cardiac Life Support (BCLS) Interim Guidelines by the American Heart Association.
F-3		Advanced Cardiac Life Support (ACLS) Interim Guidelines by the American Heart Association.

TAB G

FORMS

INDEX

TAB G-10

WATCH EMERGENCY KIT CHECK LIST
FHCZ-0401

ITEMS/KITS TO CHECK: _____ WARD: _____

DATE	PERSON CHECKING WATCH SIGNATURE\STATUS 02/PSI	DISCREPANCIES	CHARGE NURSE FOLLOW-UP	SIGNATURE
	AM			
	NOC			
	AM			
	NOC			
	AM			
	NOC			
	AM			
	NOC			
	AM			
	NOC			